



Office of the
Chairman

Waste Management
Advisory Board

Queen's Park
Toronto M7A 1A2
416/965-3007

March 12, 1976

The Honourable George A. Kerr
Minister of the Environment
135 St. Clair Ave. W., 14th Fl.
TORONTO, Ontario
M4V 1P5

Dear Mr. Kerr:

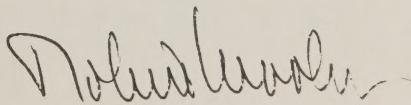
One year ago, the Minister of the Environment asked the Waste Management Advisory Board to monitor a one-year voluntary program to be carried out by the retailers, machine vendors and bottlers of carbonated soft drinks, in order to bring about a substantial increase in the use of refillable containers.

The Board submitted its Interim Report to the Minister on August 28, 1975.

The Minister also asked the Board to report and make recommendations at the end of the one-year program.

I, herewith submit, on behalf of the Board, our Report.

Respectfully,

A handwritten signature in black ink, appearing to read "R. H. Woolvett".

R. H. Woolvett
Chairman

CA20NEV 700

-76C17

THE

CARBONATED SOFT DRINK CONTAINER

IN

ONTARIO

A REPORT

TO

THE HONOURABLE GEORGE A. KERR

ONTARIO MINISTER OF THE ENVIRONMENT

FROM THE

WASTE MANAGEMENT ADVISORY BOARD

MARCH 12, 1976



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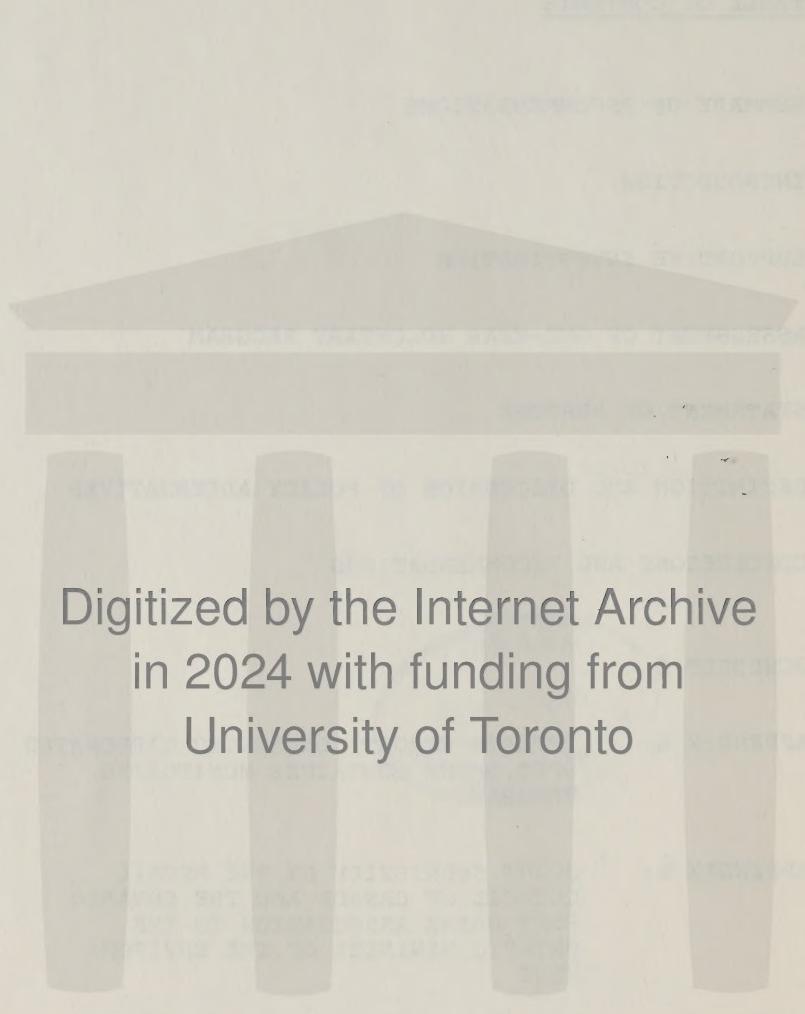
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SUMMARY OF RECOMMENDATIONS

The members of the Waste Management Advisory Board have reviewed the results of the voluntary program, and have unanimously agreed that the objectives as established by the Minister of the Environment, one year ago, have not been met.

To minimize the waste and adverse environmental impacts associated with the packaging of carbonated soft drinks, the use of and reuse rates for refillable containers must be maximized. To ensure that the desired environmental gains are attained, the Board concludes that Government action is required.

As the first part of its proposed policy program, the Board recommends that:

1. ALL BRANDS, FLAVOURS AND CONTAINER SIZES OF CARBONATED SOFT DRINKS STOCKED, DISPLAYED AND OFFERED FOR SALE IN ONTARIO BY A RETAILER BE AVAILABLE IN REFILLABLE CONTAINERS WHICH SHALL BE DISPLAYED PROMINENTLY AND IN THE SAME SECTION OF THE PRODUCT DISPLAY AREA AS ANY NON-REFILLABLE CONTAINER OF THE SAME BRAND, FLAVOUR OR SIZE. AT LEAST 50 PER CENT OF RETAIL DISPLAY SPACE FOR ANY BRAND, FLAVOUR OR CONTAINER SIZE SHALL BE USED TO DISPLAY THESE PRODUCTS IN REFILLABLE CONTAINERS.

In recognition that the above step will not in itself achieve the objectives, the Waste Management Advisory Board further recommends that:

EITHER

- 2a. REGULATIONS BE PREPARED BUT NOT FILED PENDING FURTHER NOTICE, PROHIBITING ALL RETAILERS FROM SELLING OR OFFERING FOR SALE CARBONATED SOFT DRINKS IN NON-REFILLABLE CONTAINERS ON OR AFTER APRIL 1, 1979, AND FURTHER, PROHIBITING THE SALE OF CARBONATED SOFT DRINKS IN NON-REFILLABLE CONTAINERS THROUGH COIN-OPERATED VENDING MACHINES ON OR AFTER APRIL 1, 1981.

OR

- 2b. REGULATIONS BE FILED PROHIBITING ALL RETAILERS FROM SELLING OR OFFERING FOR SALE, CARBONATED SOFT DRINKS IN NON-REFILLABLE CONTAINERS ON OR AFTER APRIL 1, 1979, AND FURTHER, PROHIBITING THE SALE OF CARBONATED SOFT DRINKS IN NON-REFILLABLE CONTAINERS THROUTH COIN-OPERATED VENDING MACHINES ON OR AFTER APRIL 1, 1981.

The ban identified in Recommendation 2a of the above two options is conditional upon the willingness and ability of industry to develop an improved system acceptable to government to increase the use and reuse of refillable containers. The implementation date for the regulation on 'mandatory availability' (Recommendation 1) would be tentatively set at April 1, 1977 under this option. If warranted by developments in the systems improvement program, this date could be postponed to October 1, 1977.

The ban on non-refillable containers identified in Recommendation 2b is definite and unconditional. Under this option, the 'mandatory availability' regulation (Recommendation 1) would become effective April 1, 1977. This action is perceived as a means to avoid sudden and severe economic dislocations when the ban is enacted.

In support of the 'mandatory availability' regulation (Recommendation 1) and the operative ban regulation (Recommendation 2a or 2b), other regulatory measures are required. The supportive regulations recommended by the Board are that:

3. THE PRODUCER, BOTTLER, DISTRIBUTOR OR VENDOR OF CARBONATED SOFT DRINKS IN REFILLABLE CONTAINERS SHALL DISPLAY PROMINENTLY THE CONTENT PRICE OF THE BEVERAGE EXCLUDING CONTAINER DEPOSIT IN ALL ADVERTISING, MERCHANDISING OR LABELLING WHERE PRICES ARE SHOWN. THE PRICE SHOULD BE DISPLAYED IN AT LEAST IDENTICAL SIZE PRINT AS ANY PRICING SHOWN FOR CARBONATED SOFT DRINKS SOLD, ADVERTISED OR MERCHANDISED IN NON-REFILLABLE CONTAINERS.
4. A RETAILER BE REQUIRED TO REFUND, IN FULL AND IN CASH, THE DEPOSIT ON ANY REFILLABLE CARBONATED SOFT DRINK CONTAINER OF A BRAND, FLAVOUR AND SIZE OFFERED FOR SALE BY THE SAID RETAILER (SUCH REFUND TO BE PAID ONLY ON A CONTAINER THAT CAN, BY WASHING AND STERILIZING, BE MADE FIT FOR THE PURPOSE FOR WHICH IT WAS ORIGINALLY INTENDED).

5. ALL REFILLABLE CARBONATED SOFT DRINK CONTAINERS PRODUCED AFTER OCTOBER 1, 1976 SHALL HAVE CLEARLY INDICATED IN A CONSPICUOUS POSITION ON THE BOTTLE OR LABEL THE WORDS 'MONEY-BACK BOTTLE'.
6. ALL LABELS PRODUCED FOR STANDARD REFILLABLE CARBONATED SOFT DRINK CONTAINERS SHALL HAVE CLEARLY PRINTED THEREON IN A CONSPICUOUS POSITION THE WORDS 'STANDARD MONEY-BACK BOTTLE'.
7. EVERY RETAILER OF CARBONATED SOFT DRINKS IN ONTARIO, EXCEPTING THOSE SPECIFICALLY EXEMPTED BY THE REGULATIONS, SHALL CONSPICUOUSLY DISPLAY ON THE PREMISES A NOTICE PROVIDED BY THE MINISTER WHICH SPECIFIES THE OBLIGATIONS OF THE RETAILER AND THE PURCHASES UNDER THE REGULATIONS.

Other Board recommendations requiring regulatory actions are that:

8. THE SALE OF SOFT DRINKS IN NON-REFILLABLE METAL CONTAINERS WHICH HAVE DETACHABLE SELF-OPENING DEVICES BE PROHIBITED ON OR AFTER JANUARY 1, 1977.
9. BY REGULATION, THE MINISTER DEFINE A CLASS OF REFILLABLE SOFT DRINK CONTAINERS TO BE DESCRIBED AS STANDARD (THE SPECIFICATIONS TO BE DETERMINED AND ANNOUNCED BY JULY 1, 1976).
10. BOTTLERS, DISTRIBUTORS AND RETAILERS BE PROHIBITED FROM SELLING OR OFFERING FOR SALE CARBONATED SOFT DRINKS IN NON-REFILLABLE CONTAINERS WHICH ARE LESS THAN 280 ML, ON OR AFTER APRIL 1, 1977.

Non-regulatory actions recommended by the Board are that:

11. A CAMPAIGN TO EDUCATE THE CONSUMER ON THE ADVANTAGES OF REFILLABLE CONTAINERS, PARTICULARLY THE STANDARD REFILLABLE CONTAINER, BE UNDERTAKEN. (THE TIMING OF SUCH A PROGRAM TO RELATE TO THE INTRODUCTION OF STANDARD REFILLABLE CONTAINERS WITH CONSIDERATION TO BE GIVEN TO A JOINT INDUSTRY-GOVERNMENT PROGRAM.)

12. A STUDY BE CARRIED OUT ON NON-CARBONATED SOFT DRINKS TO ASSESS THE IMPACT OF THE REGULATIONS ALREADY RECOMMENDED ON THE MARKETING OF THESE BEVERAGES.
13. A STUDY ON THE MACHINE VENDING SECTOR BE UNDERTAKEN TO ASSESS THE NEED FOR FURTHER GOVERNMENT ACTION.

INTRODUCTION

On March 13, 1975, the Ontario Minister of the Environment called upon retailers, bottlers, and manufacturers to increase substantially the use of refillable containers for marketing carbonated soft drinks within a one-year period. The Minister also asked the Waste Management Advisory Board to monitor the requested transformation in the marketplace; work with the retail and bottler sectors of the industry in achieving the objective; assess the results, and make recommendations at the end of the year.

The Board's evaluations and assessments have been on-going during this period of time. Input to the Board has come from its monitoring program; meetings with retailers, bottlers, vending operators, and container manufacturers; discussions with provincial and federal representatives concerned with waste management; and oral and written submissions by knowledgeable and interested associations, trade unions and members of the public.

Historical Perspective

For over a decade now, non-refillable throwaway cans and bottles have continued to increase their share of the soft drink market at the expense of refillable bottles; they now occupy a dominant position in that market. The market growth of these containers has been promoted and encouraged by carbonated soft drink container producers, bottlers and retailers. The distribution system has become more and more oriented to the delivery of soft drinks in one-way cans and bottles and, concomitantly, consumers have become accustomed to disposing of these in their garbage and as litter.

In 1965, the transition by industry to the greater use of non-refillables increased rapidly and the efficiencies of the remaining refillable system diminished to the point of the system becoming ineffective. It is essential for environmental and economic reasons that high trippage levels (the number of times a refillable bottle is reused) be achieved. With non-refillable containers increasingly taking over a larger share of the market and with lower trippage rates being realized for refillables, the amounts of solid waste generated and energy and materials consumed have grown significantly.

1975-1976

The Waste Management Advisory Board estimates that carbonated soft drink containers and cartons in 1975 contributed approximately 170,000 tons to Ontario's waste load, more than four per cent of municipally collected garbage. About 60 per cent of the Ontario soft drink container market is in non-refillable containers; the remainder is in refillables. Non-bulk (retail and vending) containerized sales of soft drinks in Ontario for 1975 totalled 125 million gallons. Dollar sales reached an estimated \$300 million at the retail level. Overall, more than 1.3 billion bottles and cans were required to deliver this gallonage to the consumer. Today, container sizes sold at the retail level fall into two categories: the single-drink size (10-oz. (300ml)) and family-sizes (eight sizes ranging from 26-oz. (750ml) to 52.8-oz. (1.5 litres)).

The market shift to non-refillable containers has been accompanied by a proliferation in container sizes and proprietary shapes. With the preponderance of non-refillable cans and bottles in retail stores, availability to the consumer of refillables has diminished markedly. In many parts of the province, consumers not only have difficulty finding their favourite brands in refillable bottles, but experience difficulty returning the empty containers for deposit-refund. Most retail outlets will not pay container refunds on brands or sizes that they do not handle. Consumers who do purchase soft drinks in refillable containers are thereby often frustrated in trying to return their empties. The result is an inefficient system and low trippage rates for refillable bottles in the many urban market areas which are dominated by non-refillables.

It can be stated that the substantial environmental benefits (reduced solid waste generation, reduced litter, reduced energy and material consumption) which can be realized by maximizing the use and reuse of refillable bottles is directly dependent on the existence of a smoothly functioning distribution system. The distribution system for refillable bottles involves (1) the flow of product and container from the bottler to the retailer and the consumer, and (2) the return of the empty container back to the retailer and the bottler. The consumer is an integral and essential element of the system. It is evident from the experience in Ontario that the existing carbonated soft drink distribution system, largely oriented towards non-refillable containers, probably cannot, without modification, achieve the efficiencies necessary to provide significant environmental gains.

There are no simple solutions to the environmental problems associated with packaging of carbonated soft drinks. Any course of action which government may wish to take must carry with it the promise that the expected environmental gains will justify the action.

SUPPORTIVE INVESTIGATION

The Waste Management Advisory Board carried out a number of investigations in order to determine the degree of industry response to the objectives put forward by the Minister of the Environment one year ago. This work included surveys of:

1. soft drink advertising in newspapers
2. gallonage sales figures for carbonated soft drinks sold in retail food stores
3. the extent to which soft drinks were being offered for sale in refillable containers in retail food stores
4. container production trends, sales and employment data
5. vending industry sales data.

PROMOTION BY ADVERTISING

In his speech of March 13, 1975, the Minister of the Environment stated that the Government favoured implementation of the Solid Waste Task Force recommendation that: "Soft drink companies and vendors be encouraged to promote the sale of soft drinks in refillable containers." He also stated: "Your marketing programs for carbonated soft drinks should feature the benefits in terms of energy conservation, in terms of enhancement of the environment and in terms of economy which the returnable, refillable container provides."

The expectations of the Minister have not been met. This conclusion is based upon surveys of soft drink advertisements placed by bottlers and retail food chains in daily newspapers in Toronto, London and Ottawa, since May 1975.

A key finding of this survey for Toronto was that only 25 per cent of the 238 advertisements surveyed promoted the sale of carbonated soft drinks in refillable bottles. The remainder were devoted to the promotion of carbonated soft drinks in non-refillable containers. The London results were similar to those for Toronto. In Ottawa it was found that carbonated soft drinks were promoted more in refillable containers than in non-refillable containers.

Within the Toronto and London surveys, the individual performances of bottlers and retailers varied considerably. Only one major retail chain gave greater stress in its advertising to soft drinks sold in refillable containers than in non-refillable containers. With regard to selling price, only one major retailer and two bottlers advertised that a given soft drink was cheaper in a refillable bottle than in non-refillable containers. At the same time, only one bottler advertised that the buying of soft drinks in refillable bottles was environmentally desirable.

The in-store promotion of carbonated soft drinks in refillable containers, with some exceptions late in the program, was generally disappointing. Store displays frequently did not specify whether carbonated soft drinks were being sold in refillable or non-refillable containers. When carbonated soft drinks were available in refillable bottles, there was often uncertainty as to whether or not the price displayed was for the contents only or for the contents and deposit combined.

TREND OF GALLONAGE SALES BY CONTAINER SIZE AND TYPE

In his speech of March 13, 1975, The Minister of the Environment stated: "The Government intends to effect a substantial increase in the use of refillable containers." Gallonage sales by container type has been used as the prime measure of this increase.

Information concerning gallonage sales by container size and type was obtained from A.C. Nielsen Company of Canada Limited and the Ontario Soft Drink Association.

Nielsen Canada estimates that soft drinks sold in retail food stores constitute 45 per cent to 50 per cent of the total Ontario soft drink market.

PERCENTAGE OF GALLONAGE SALES OF CARBONATED SOFT DRINKS IN FOOD STORES

<u>YEAR</u>	<u>REFILLABLE BOTTLES</u>	<u>NON-REFILLABLE CONTAINERS (CANS AND BOTTLES)</u>
(percentages)		
1971	54.6	45.4
1972	31.4	68.6
1973	29.2	70.8
1974	28.1	71.9
1975	30.8	69.2

Source: Nielsen Canada

A comparison of 1974 and 1975 figures indicates a slight increase in soft drinks in refillable bottles in food stores throughout Ontario. Graph 1 gives a detailed breakdown on a bi-monthly basis and exhibits clearly a sustained trend over the last three quarters of 1975 towards refillable containers.

The Ontario Soft Drink Association provided data for 1974 and 1975 showing containerized gallonage sales of national brands by the five major soft drink bottlers to food stores as well as other retail and vending operations in and around Metropolitan Toronto. Changes in containerized sales between 1974 and 1975 are summarized in the following chart.

PERCENTAGE CHANGE IN GALLONAGE SALES FOR
METROPOLITAN TORONTO AREA FROM 1974 TO 1975
(National Brands Only)

CONTAINER TYPE	UNDER 16-OZ.	16-OZ. AND OVER	TOTAL MARKET ~
(percentage change)			
NON-REFILLABLE BOTTLES	-5.3%	+4.8%	+3.3%
CANS	-9.0%	n/a	-9.0%
TOTAL NON- REFILLABLES	-8.8%	+4.8%	-4.8%
REFILLABLES	-10.2%	+8.7%	+3.0%
TOTAL CONTAINERS	-9.0%	+6.7%	-2.6%

Two key changes have taken place for national brands in the Metropolitan Toronto area:

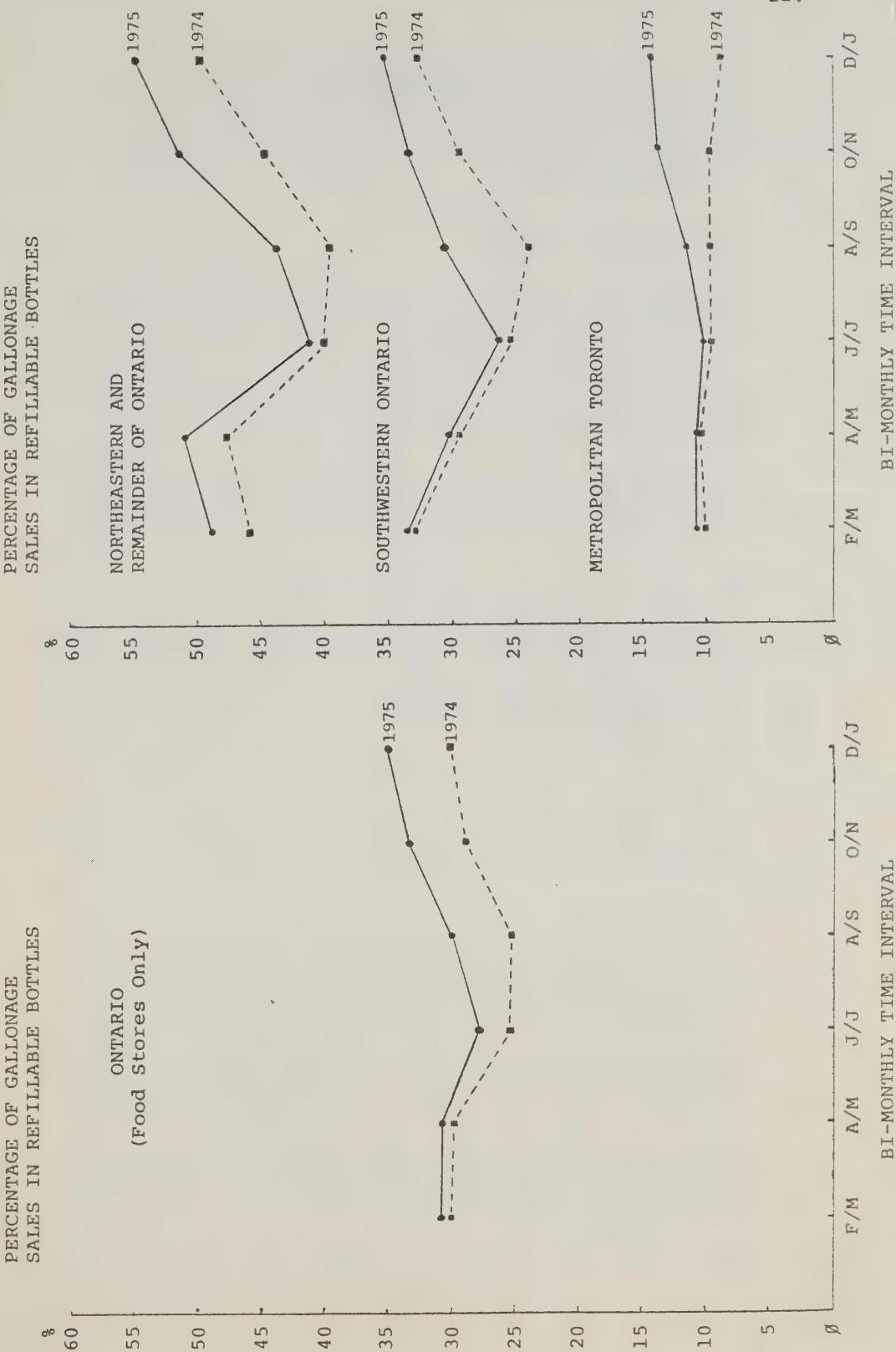
1. There has been a significant shift in gallonage sales from the under 16-oz. size to the family-size.
2. The largest share of sales gains in the family-sizes has gone to refillable bottles.

MARKET SHARE OF GALLONAGE SALES FOR CARBONATED SOFT DRINKS IN REFILLABLE BOTTLES
 (10-OZ AND FAMILY SIZES) IN ONTARIO FOOD STORES - BI-MONTHLY FOR 1974 and 1975

SOURCE: A. C. NIELSEN COMPANY OF CANADA LIMITED

Graph 1

PERCENTAGE OF GALLONAGE
 SALES IN REFILLABLE BOTTLES



It is interesting to note that between 1971 and 1975, gallonage sales of carbonated soft drinks increased by approximately 16 per cent while solid waste increased by approximately 30 per cent and the total container energy requirement increased by approximately 23 per cent.

AVAILABILITY ANALYSIS

In his speech of March 13, 1975, The Minister of the Environment asked "that all brands and package sizes of carbonated soft drinks stocked and sold by a retailer in Ontario must be offered for sale in refillable containers". To determine the extent of the retail industry's co-operation with this request, a monitoring program of randomly selected retail food stores was carried out by the Board across the province. In total, 205 different stores were visited during the course of the program. Main emphasis, however, was placed upon a primary sample of 106 stores, and it is with regard to the visits to this group of stores that the findings on availability in this report are based.

The 106 stores are located in 14 urban centres. Altogether, they represent 20 different retail chains, plus a number of independent grocery and variety stores. Each store was visited on three separate occasions between July 1975 and January 1976. In addition, the 30 stores of the sample located in Metropolitan Toronto were visited a fourth time in February 1976.

In line with the Minister's request, the purpose of each store visit was to obtain a measure of the number of brands and sizes of soft drinks available in refillable containers as compared to the total number of brands and sizes available, i.e., a measure, in percentage terms, of the 'brand-size availability' of soft drinks in refillable containers.

In this context, total or 100 per cent availability of soft drinks in refillable containers for a given store means not only that every brand carried by the store must be available in refillable containers but also that every brand-size carried by the store must be available in refillable containers.

The overall results of the survey are represented by the figures below, which show brand-size availability percentages for soft drinks in refillable bottles as well as for non-refillable bottles and cans. The key finding is that brand-size availability of soft drinks in refillable bottles increased from 27 per cent in July 1975 to 33 per cent in January 1976, a gain of only six percentage points.

PERCENTAGE BRAND-SIZE AVAILABILITY
BY CONTAINER TYPE
(106 stores)

MONITORING PERIOD	REFILLABLE	NON-REFILLABLE	CAN
	BOTTLE	BOTTLE	
(percentage)			
01 (May-July/75)	27%	34%	41%
02 (Sept-Nov/75)	30	33	41
03 (Dec/75-Jan/76)	33	33	43
<hr/>			
CHANGE 1st-3rd PERIODS	+6%	-1%	+2%
<hr/>			

A more detailed breakdown of the results of the survey is presented in Charts 1, 2, 3 and 4 which show brand-size availability on a regional basis, by supermarket chain, and according to urban area (i.e., Toronto, Ottawa, Hamilton and Windsor).

On a regional basis, as indicated in Chart 1, there were noticeable improvements in refillable brand-size availability during the course of the monitoring program in four regions and a slight decline in one region. The highest level of availability was in the south-eastern region of the province (Ottawa-Kingston); the lowest, in the central region (Brampton-Mississauga-Toronto-Oshawa).

For the selected urban centres, as indicated in Chart 2, the results were basically the same as those registered by the regional breakdown. The highest degree of refillable brand-size availability was found to be in Ottawa; the lowest, in Toronto.

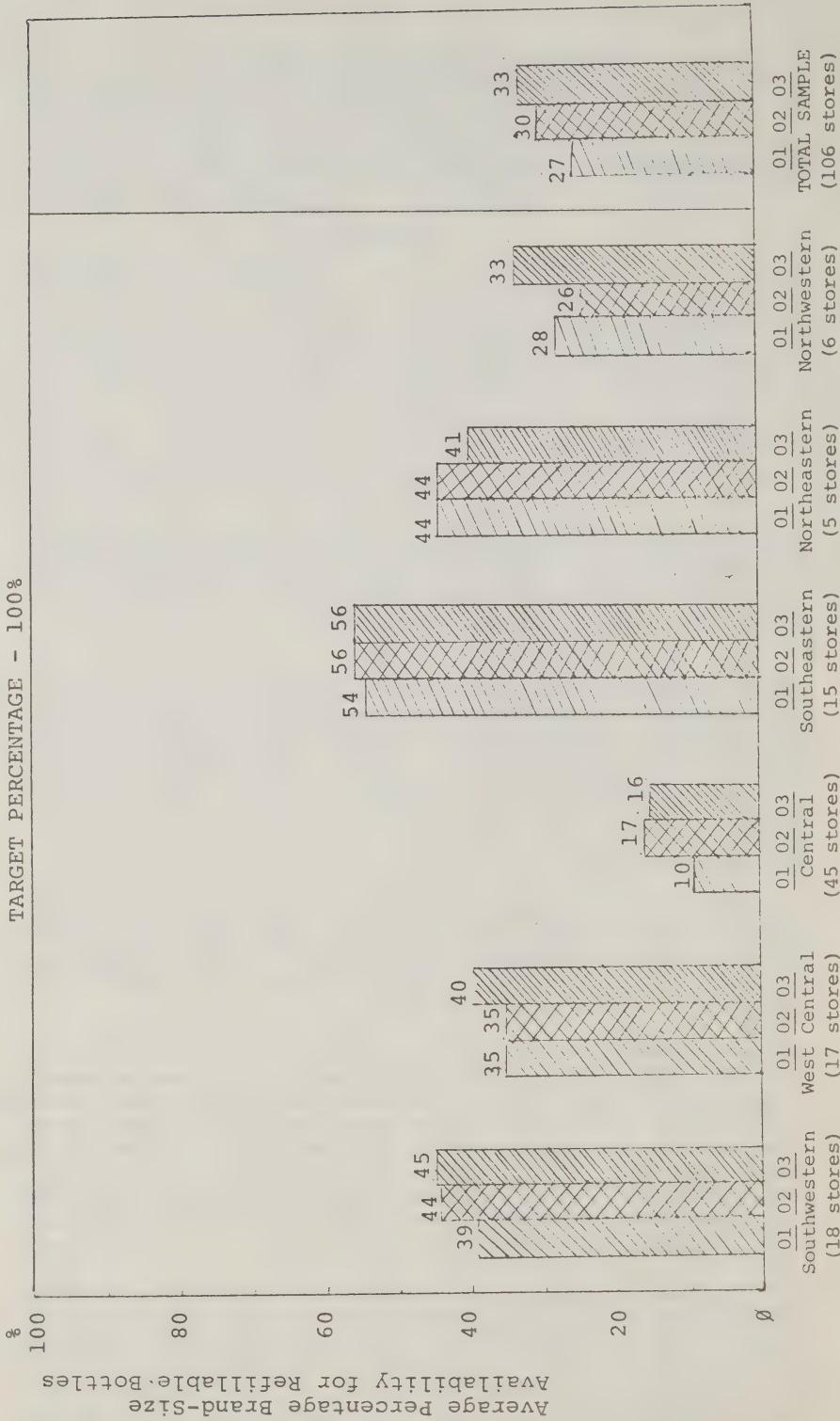
Of six supermarket chains, as shown in Chart 3, only one made significant improvements in refillable brand-size availability during the monitoring program. Noticeable improvements were made by three other supermarket chains; little improvement, by the remaining two chains. Since the end of the last round of visits in January, three major supermarket chains have announced plans to increase the availability of soft drinks in refillable bottles significantly.

An interesting aspect of refillable brand-size availability concerning supermarket chains was the extent to which it varied among stores of the same chain from one part of the province to another: While one store in Toronto might only have two per cent refillable brand-size availability, another in Ottawa might have 40 per cent refillable brand-size availability.

SOFT DRINK MONITORING PROGRAM

AVERAGE PERCENTAGE BRAND-SIZE AVAILABILITY
FOR REFILLABLE BOTTLES BY REGION FOR THE PRIMARY SAMPLE
MONITORING PERIODS 01 (MAY-JULY/75), 02 (SEPT-NOV/75) AND 03 (DEC/75-JAN/76)

TARGET PERCENTAGE - 100%



SOFT DRINK MONITORING PROGRAM

Chart 2

AVERAGE PERCENTAGE BRAND-SIZE AVAILABILITY IN REFILLABLE BOTTLES
 FOR THE PRIMARY SAMPLE - SELECTED URBAN CENTRES
 MONITORING PERIODS 01 (MAY-JULY/75), 02 (SEPT-NOV/75) 03 (DEC/75-JAN/76)
 AND 04 (FEB/76)

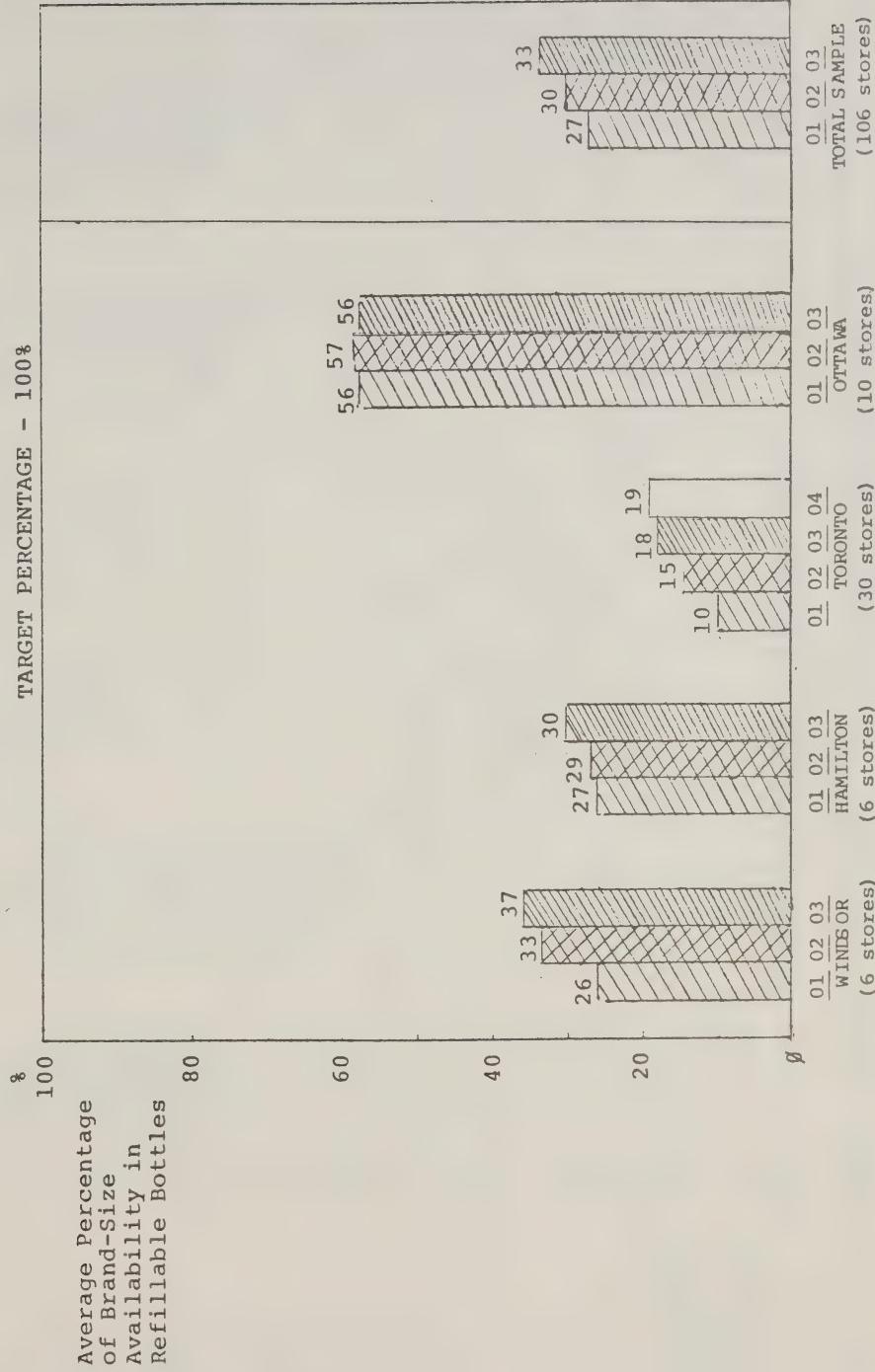


Chart 3

SOFT DRINK MONITORING PROGRAM

AVERAGE PERCENTAGE BRAND-SIZE AVAILABILITY IN REFILLABLE BOTTLES
 FOR THE PRIMARY SAMPLE FOR SUPERMARKETS
 MONITORING PERIODS 01 (MAY-JULY/75), 02 (SEPT-NOV/75) & 03 (DEC/75-JAN/76)

TARGET PERCENTAGE - 100%

%

Average Percentage
 Of Brand-Size
 Availability in
 Refillable Bottles

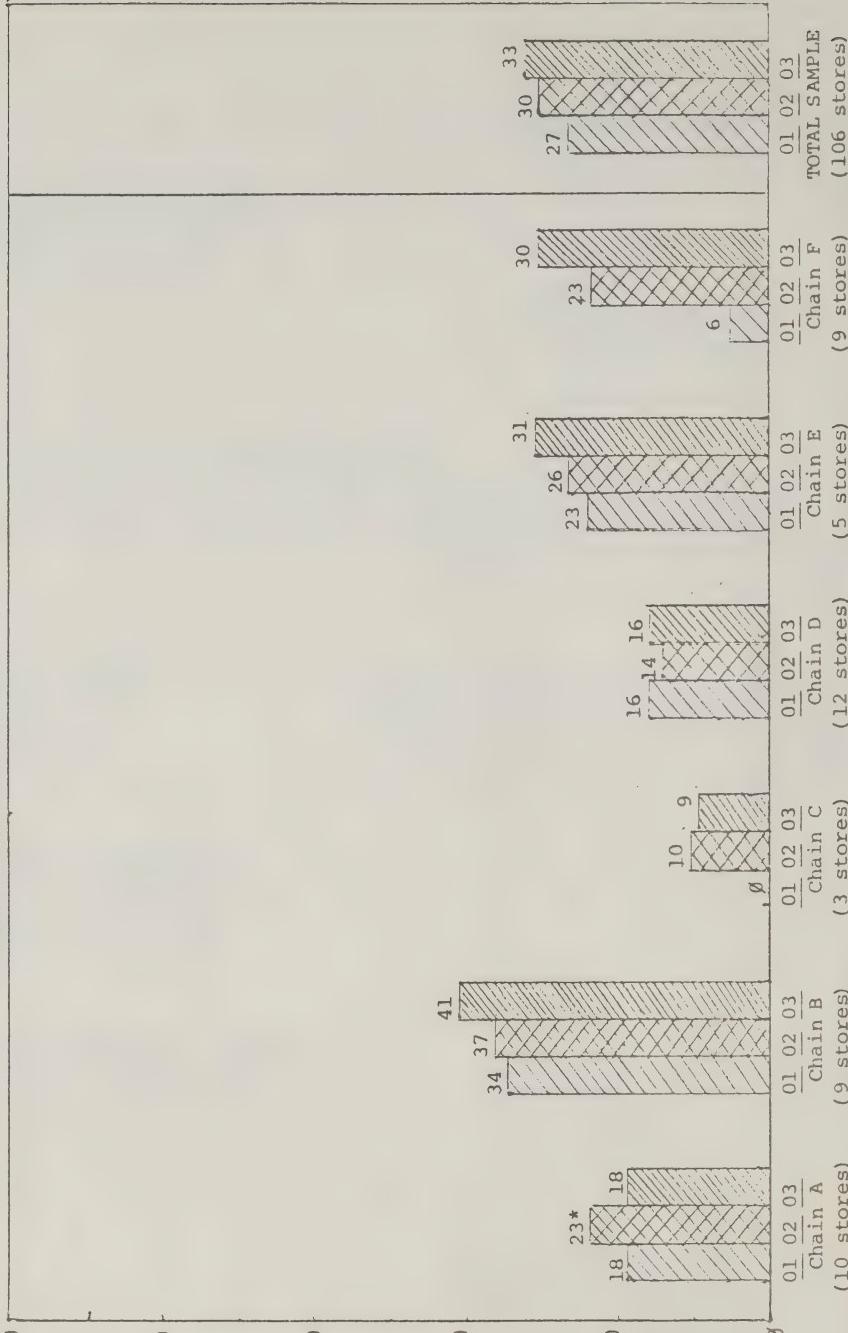
80

60

40

20

0

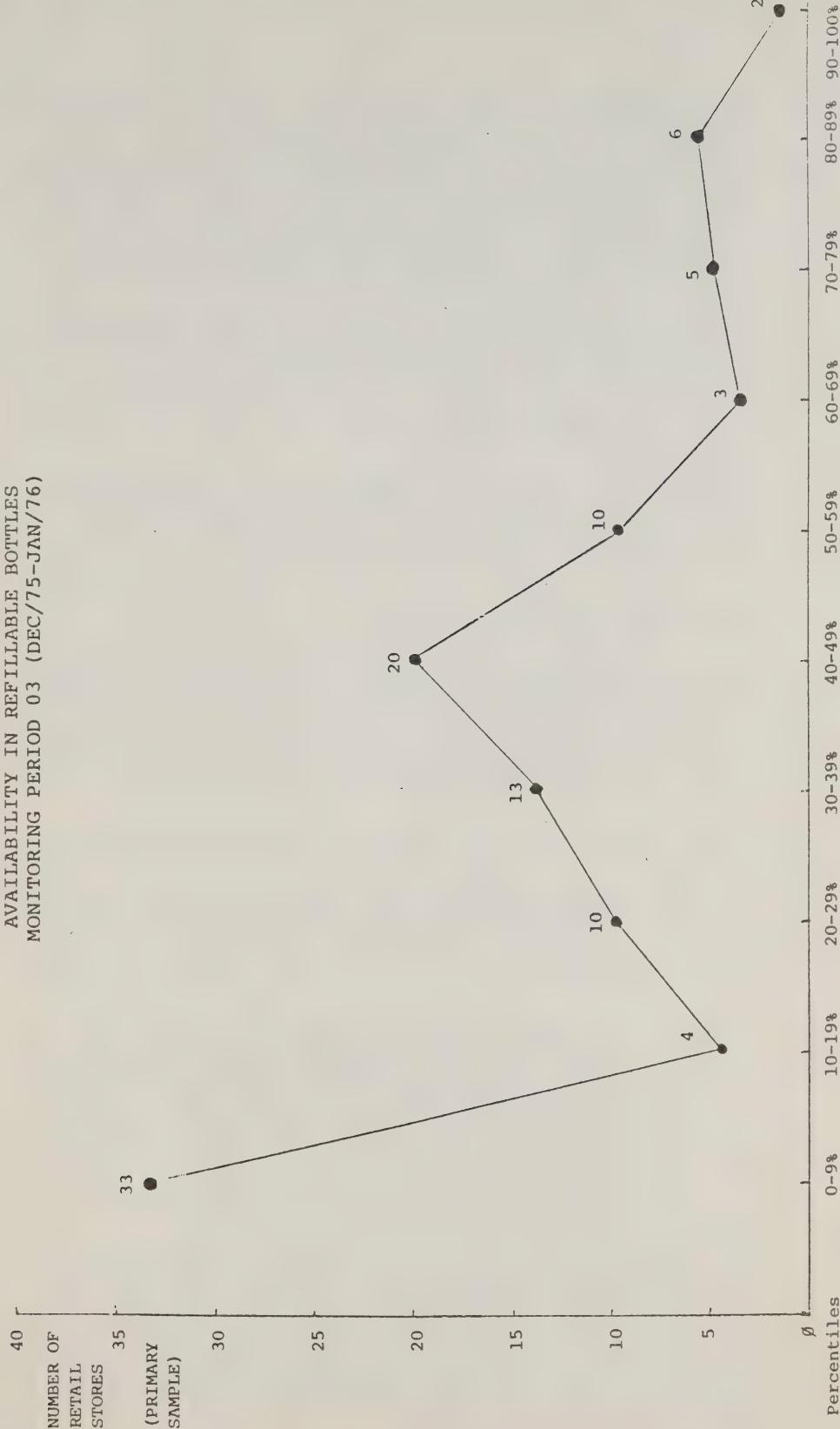


*Artificially high because of a test undertaken in one store on refillables for a limited period.

Chart 4

SOFT DRINK MONITORING PROGRAM

FREQUENCY DISTRIBUTION OF RETAIL STORES IN THE
PRIMARY SAMPLE FOR PERCENTAGE BRAND-SIZE
AVAILABILITY IN REFILLABLE BOTTLES
MONITORING PERIOD 03 (DEC/75-JAN/76)



More information about the varying degree of refillable brand-size availability among stores is given in Chart 4. Based upon the third round of store visits, the chart indicates that 33 of the 106 stores had a refillable brand-size availability of less than nine per cent; that 80 stores had a refillable brand-size availability of less than 50 per cent, while only two stores had a refillable brand-size availability of more than 90 per cent.

The preceding assessment clearly indicates that the 100 per cent brand-size availability requirement for individual retail stores has not been met.

COUNTAINER INDUSTRY INPUT

Production, sales, and employment data, much of it confidential in nature, was provided by the Metal Container Manufacturers' Advisory Council and the Glass Container Council of Canada.

Container Production Trends

Some indication of the respective use of refillable and non-refillable containers for soft drinks can be gained by studying container production trends. The results of such analysis, however, can only be approximate as some of the containers sold to Ontario bottlers are, in turn, shipped out of the province. This is particularly true in the case of cans.

From 1972 to 1975, the following significant changes took place in container manufacture:

- (1) Production of family-size bottles increased -- refillables by 68 per cent, non-refillables by 23 per cent.
- (2) Production of 10-oz. cans increased by about 22 per cent (making no adjustments for export). This shift was accompanied by a 63 per cent decrease in manufacture of refillable bottles in the single-service size.
- (3) Between 1974 and 1975, can production decreased by 15 per cent.

Unit Container Selling Prices

Soft drink bottlers have had to pay more for containers in recent years. Refillable bottle costs have increased the least; can costs have increased the most -- one reason why bottlers bought fewer cans from the metal container industry in 1975.

Employment

In 1972 it was indicated that all of the 577 production workers directly associated with can manufacture and 495 of the 910 workers connected with bottle manufacture would be laid off in the event of a ban on non-refillable soft drink containers -- a total of 1072 production workers. Today, due to increased non-refillable container production, this number would be greater by approximately 18 per cent. Some support workers in both industries would also be laid off as the result of a ban or an extreme market shift to the use of refillable bottles. Employment dislocation in the glass industry would be dependent upon the trippage rates attained.

Potential Loss of Investment

The metal container industry has indicated that there would be substantial investment loss of machinery and equipment, and that at least one plant would be expected to close in the event of a major shift to refillables in the 10-oz. market. The glass container industry has also indicated that substantial excess capacity would result if non-refillable bottles were to lose their share of the market. Because of the limited and highly aggregated nature of the data presented by the container councils, the Advisory Board has not been able to fully assess the projected economic impacts.

THE VENDING INDUSTRY

Data available on the vending industry is limited and of a fragmentary nature. In terms of containerized (non-bulk) sales of carbonated soft drinks, it appears that vending machines account for approximately five per cent of Ontario gallonage sold, the greatest share being in cans.

In terms of dollar volume in 1975, approximately 35 per cent of total vending machine sales was in cans; 61 per cent, in paper cups; three per cent, in bottles. Can vending machines have approximately twice the capacity of bottle dispensing machines, are much easier to maintain and are more quickly serviced (filled with new containers and change extracted).

There have been definite trends evident in the sale of new vending machines over the past five years. The percentage breakdown of new machine sales over this period is shown in the following table.

MACHINE*	1971	1973	1975
TYPE	%	%	%
Bottle	34	16	6
Can	66	51	48
Convertible	-	9	28
Post-Mix (cups)	-	18	17
Pre-Mix (cups)	-	6	-

Book value of past investments in vending machines was roughly \$5,000,000 in 1975. Approximately 43 per cent of this amount, or \$2,000,000, was tied up in can vending machines. The average life of a vending machine has been quoted as being five years.

*For much of the data presented in this section, it has been necessary to rely on statistics provided by the Canadian Automatic Merchandising Association.

ASSESSMENT OF ONE-YEAR VOLUNTARY PROGRAM

The Board's primary findings concerning the one-year voluntary program are as follows:

1. Little increase in the availability of carbonated soft drinks in 10-oz. refillable bottles has taken place.
2. General availability of carbonated soft drinks in family-size refillable bottles in large supermarkets has increased but refillable availability is still far from complete in the large sizes.
3. There is some evidence that small independent stores are continuing to move toward non-refillables (many of these stores are not members of organized trade associations).
4. The decline in market share of carbonated soft drinks sold in refillable bottles has been halted and the trend, although modest, has been reversed for the first time since non-refillable containers were first introduced in the early 1960's. Refillable bottles are now showing a continuing and sustained penetration of the market, primarily in family-sizes.

The overall results of the one-year program have been disappointing. Although the general trend to increasing non-refillable use has been arrested and the availability of refillables has increased to some extent in the family-sizes, it remains difficult to buy soft drinks in refillable 10-oz. bottles.

The chief stumbling block to significantly improved refillable availability has been the reluctance, with one or two exceptions, of the retail chains to stock large quantities of soft drinks in refillable containers. There are three major reasons for this position:

1. The burden of handling returned refillable containers falls largely on the retailer, and many supermarkets have limited space in which to store them.
2. Retail shelf space is limited. In some instances, where chains have tried to comply with the Government's program, the competition for shelf space has led to extensive delisting of some soft drink brands.

3. The number of bottle shapes and sizes in proprietary refillables is causing an increase in handling costs where they have been re-introduced. As a result, most retailers have expressed a preference for standard bottles (in two sizes) to solve both space and handling problems.

The bottlers, for their part, have indicated through the Ontario Soft Drink Association that they are ready to reduce the number of bottle sizes, and to increase the use of refillable containers in addition to their recent raising of deposit levels for refillable containers. However, they have not specifically indicated a readiness to increase significantly the use of refillable bottles in the 10-oz. size. Some bottlers support the development of a standard refillable system; others do not.

Central to the failure of the voluntary program was the inability of the bottlers and retailers to work together on a common basis until late in the one-year period. It was not until January 1976 that the Ontario Soft Drink Association and the Retail Council of Canada finally met to develop the joint submission subsequently presented to the Minister of the Environment on February 16, 1976. That submission is attached to this Report as Appendix 'B'.

The lateness of the joint action by retailers and bottlers was accompanied by some individual delayed efforts to contribute to the voluntary program. Due to the timing of these actions, the Advisory Board has not been able to assess them properly in terms of their impacts on consumer buying habits.

STATEMENT OF PURPOSE

The Waste Management Advisory Board developed this Statement of Purpose to provide guidance in the analysis of policy options.

It is, first of all, the goal of the Advisory Board to identify ways:

TO MINIMIZE THE WASTE AND ADVERSE ENVIRONMENTAL IMPACTS ASSOCIATED WITH THE PACKAGING OF CARBONATED SOFT DRINKS.

These adverse environmental impacts stem from the production, distribution, and use of both primary containers and secondary packaging. They include:

1. litter
2. generation of solid waste
3. consumption of energy and other non-renewable resources
4. land, air and water pollution resulting from manufacture, distribution and disposal.

Two objectives are essential to the achievement of the goal:

1. THE MAXIMIZATION OF THE USE OF REFILLABLE CONTAINERS

The return of a refillable container back through the system and the washing of it, in preparation for a subsequent tour, are operations that consume energy and cause pollution, but to a lesser extent than all of the operations involved in the production and distribution of a new container.

2. THE INCREASE OF REUSE RATES FOR REFILLABLE CONTAINERS

The environmental benefits that accrue to refillable containers depend on the degree to which the average trippage increases. However, if the adverse effects of both initial manufacture and return of the container are considered, it is clear that per-trip environmental costs decrease with increasing trippage. (In fact, there is an environmental break-even point below which the refillable cannot be justified when compared to the single trip non-returnable.)

For family-size containers, the refillable is environmentally justified if the average container makes two trips or more before being discarded. In the 10-oz. size, approximately ten trips are required before the refillable glass bottle becomes environmentally preferable on all counts to its competitor, the 10-oz. can.

In some soft drink markets that are predominantly refillable, trippage rates have been reported between 16 and 18. For reasons cited elsewhere, a standard refillable soft drink container could be expected to achieve trippage rates well in excess of this level. A reuse factor of 25 trips per container is probably a reasonable expectation for standard containers established in an appropriate systems context. Clearly, if significant improvements in recovery rates are to be experienced, the introduction of standard refillable containers must be given full consideration.

DEFINITION AND DISCUSSION OF POLICY ALTERNATIVES

Introduction

The Board identified and evaluated a considerable number of policy alternatives before arriving at its final recommendations. None of the individual options discussed in this section was on its own deemed to be a sufficient solution to the problem; rather, a number of them have been combined in the final policy recommendations.

In assessing each policy alternative, the Board considered social and economic effects as well as environmental gains. Policy options were evaluated as to the relative ease of implementation and to the degree of predictability in terms of both direct and secondary side effects.

BASIC SYSTEMS

1. Bans

In simple terms, a ban is a regulated prohibition against the sale of carbonated soft drinks in non-refillable containers. There has been more public support for the ban option than for any other basic system: Over 234 municipalities endorsed resolutions urging a ban on non-refillable carbonated soft drink containers; three thousand letters have been received by the Ministry of the Environment, almost all supporting a ban; 30 member organizations of the Conservation Council of Ontario and almost all of the environmental groups favour a ban. All sectors of the industry, including the labour unions, are opposed to this measure.

NOTE: Reference is made in the following text to standard generic containers. A standard container is a refillable bottle of specified shape, size, colour, weight and type of closure which can be refilled and interchanged by any manufacturer who uses it. The only distinguishing feature between containers of different brands and flavours would be the paper labels and the print on the closures. For the retail trade there would be two sizes of standard: a single-serving size of 300 ml and a family-size of either 750 ml or one litre, each size in both clear flint and green glass. Appendix C contains a discussion of the perceived advantages of standard containers.

An immediate ban, to be implemented within a one-year period, would cause severe economic dislocation and there would be no assurance that the resulting distribution system would produce suitably high trippages for refillables. For these reasons, an immediate outright ban has been rejected.

A delayed ban (phased over three to five years) and a conditional delayed ban have been dealt with in the Board's final policy recommendations.

2. Universal Container Refund System

The State of Oregon has had a system in operation for over two years in which all retailers of carbonated soft drinks are required by law to pay a refund of five cents on all non-refillable and refillable containers. As a result, retailers are reluctant to stock cans, the sales of which have fallen to approximately nine per cent of the total market. The remaining 91 per cent of the market is in refillable glass. Non-refillable glass very quickly disappeared from the marketplace.

Universal refunds would probably show varying impacts and degrees of effectiveness depending on the supportive measures employed in the system. The disruptive effects of the system would almost entirely be experienced in the first year of such a program. Because of the difficulty of controlling the rate of changes in the industry and the inefficiency inherent in returning low (possibly negative) value containers back through the distribution network, this option has not been put forth as part of the final policy proposal.

3. Mandatory Availability of Refillables

Regulations passed to implement this system would require every retailer to offer a refillable container for every brand, flavour and size of carbonated soft drink he sells.

This does not mean that a retailer is required to "double stock" every brand, flavour and size of soft drink he sells. He would be obliged to "double stock" only in those brands, flavours and sizes that he chose to offer in non-refillable containers.

It could be expected that retailers would stock far fewer non-refillables in order to cut down on the number of packages competing for shelf space.

As the sole component of a program, this option has been rejected on the basis that the expected share of market for refillables would probably be substantially less than with other available alternatives and that there would be no guarantee of acceptably high trippage being achieved through this measure alone.

Mandatory availability has been included as an integral part of the Board's final recommendation.

4. Mandatory Availability of Standard Refillables

Similar to the preceding option, the regulation envisioned in this case would require the offering by the retailer of carbonated soft drinks in a family-size standard (either 750 ml or 1 litre) for every brand and flavour offered in a non-refillable family-size container.

Similarly, for every brand and flavour offered in the single-service size (10-oz. to 16-oz.) in a non-refillable container, the retailer would be obliged to offer the same brand and flavour in a 300 ml standard refillable container. Because of the need for compatible distribution systems to accommodate the standard, it was not felt that this regulation could be recommended without supporting developmental work and agreement from industry to use standard refillable containers.

5. Differential Rates of Sales Tax

This measure concerns the application of a sales tax on the sale of carbonated soft drinks in non-refillable containers to serve as a punitive action against such containers. The amount of the tax could be variable and would serve to create a price differential between refillable and non-refillable containers, thereby influencing consumer choice.

This option has been rejected primarily on the grounds that the presence of a tax on an environmentally undesirable package implies a qualified approval, i.e., a license to pollute. With the present economic climate, the tax would of necessity have to be relatively high. It would also pose collection problems for retailers, and its overall impact would be difficult to anticipate with any accuracy.

If the means of achieving the price differential were to mean removal of the existing retail sales tax from carbonated soft drinks sold in refillable bottles, it would have the effect of promoting the sale of a luxury product -- an unacceptable proposition in the view of the Board. Accordingly, the use of the Retail Sales

Tax as a disincentive to the use of non-refillables is not favoured by the Board.

6. Voluntary Program

This would entail an extension of the voluntary program in which the Minister of the Environment asked the private sector to show substantial progress in returning the refillable container to the marketplace within a year. This program expires on March 13, 1976.

Rejection of an extension to the voluntary program as the sole means of achieving the goals of the Advisory Board has been based on the slow progress of the industry over the past year.

7. Depots (For Return of All Empty Beverage Containers)

The best known example of such a depot system is the one in existence in Alberta. Non-refillable and refillable containers can be returned to a central depot and refillable containers to a retailer for a deposit-refund.

The Alberta System has been rejected on the basis of high costs which must ultimately be borne by the consumer. It is an inadequate system in that it relieves the bottler and retailer of bearing the full costs of environmentally poor containers. Consequently, there is a built-in support in the system for non-refillables. If adopted, this option would clearly violate the stated objectives of increasing the use and reuse of refillables.

8. Depots (For Return of Empty Standard Refillables)

The intent of this alternative would be to encourage the stocking and sale of standard refillables by retailers. If standard empties could be returned, either to the retailer or to a standard refund centre, the handling burden on the retailer would be lessened.

There are organizations in Ontario which presently have the facilities and systems for undertaking such a function. The costs of returning standard empties through such a system would be apparently higher than through the retailer. However, the retailer's handling costs are buried in the mark-up on soft drinks and would probably be of the same order of magnitude as the costs incurred in a standard refund centre system.

If such a system were to be given serious consideration, which has not been done to date, proper study would have to be carried out.

9. Mechanical Resource Recovery and Recycling

The province's resource recovery plants have not been designed to handle the entire municipal waste stream and it may be some time before a significant part of our wastes can be so processed. This route is far less efficient in terms of energy consumption than refillable systems would be.

As the sole approach to the solid waste problem caused by beverage containers, mechanical resource recovery is deficient in that it places the costs of rectifying the situation on all of society rather than upon those who are the users of the system. Also, recycling of the secondary materials is not assured due to fluctuations in market prices.

10. Separate Collection and Recycling

Schemes involving source separation at the household level and separate collection offer great promise in the future for reducing the solid waste load and recovering otherwise wasted resources. However, the success of such projects are dependent upon fluctuating market prices and householder participation rates. The scrap price factor leads to source separation projects that are sporadic in nature. Also, more energy is required to recycle than to refill containers. Recycling is considered to be a desirable activity which will go on regardless of the program eventually chosen. As with mechanical resource recovery, separate collection is not a sound approach to the problem unless supported by other actions.

CONCLUSIONS AND RECOMMENDATIONS

Although there has been some movement towards the objectives set out for the voluntary program, the Waste Management Advisory Board has concluded that it has been inadequate. Further government action is required.

In evaluating the various policy options available, it was decided that no single alternative could satisfy the objectives of maximizing the use of, and the reuse rates for refillable containers. Rather, the Board is recommending that a program containing a number of mutually supportive policy components be adopted.

Mandatory Availability

To ensure the substantial return by industry and the consumer to the use of refillable containers, the first part of the Board's recommendation is that:

1. ALL BRANDS, FLAVOURS AND CONTAINER SIZES OF CARBONATED SOFT DRINKS STOCKED, DISPLAYED AND OFFERED FOR SALE IN ONTARIO BY A RETAILER BE AVAILABLE IN REFILLABLE CONTAINERS WHICH SHALL BE DISPLAYED PROMINENTLY AND IN THE SAME SECTION OF THE PRODUCT DISPLAY AREA AS ANY NON-REFILLABLE CONTAINER OF THE SAME BRAND, FLAVOUR OR SIZE. AT LEAST 50 PER CENT OF RETAIL DISPLAY SPACE FOR ANY BRAND, FLAVOUR OR CONTAINER SIZE SHALL BE USED TO DISPLAY THESE PRODUCTS IN REFILLABLE CONTAINERS.

The Board recognizes, however, that this step will not in itself ensure that refillable container reuse rates will reach the levels required to produce the desired environmental gains.

The Board, therefore, has identified two possible courses of action which are available.

The first calls for the introduction of a ban on non-refillables in three years, unless the private sector meets certain specified conditions or 'minimal criteria' as presented in Schedule 1.

The second calls for a definite and unconditional ban on non-refillables in three years. The essential difference between these options is the degree of government intervention on the one hand and the predictability in terms of environmental gains on the other.

The conditional ban option has been made possible as the result of an offer from industry to undertake a distribution systems improvement program. (See Joint Industry Brief in Appendix 'B'.) The Board feels that an improved system is a clear prerequisite to the maximization of environmental and economic benefits.

The Board recommends for the consideration of the Minister the following two options:

2a. Conditional Ban

THAT REGULATIONS BE PREPARED BUT NOT FILED, PENDING FURTHER NOTICE, PROHIBITING ALL RETAILERS FROM SELLING OR OFFERING FOR SALE CARBONATED SOFT DRINKS IN NON-REFILLABLE CONTAINERS ON OR AFTER APRIL 1, 1979, AND FURTHER, PROHIBITING THE SALE OF CARBONATED SOFT DRINKS IN NON-REFILLABLE CONTAINERS THROUGH COIN-OPERATED VENDING MACHINES ON OR AFTER APRIL 1, 1981.

OR

2b. Definite Ban

THAT REGULATIONS BE FILED PROHIBITING ALL RETAILERS FROM SELLING OR OFFERING FOR SALE, CARBONATED SOFT DRINKS IN NON-REFILLABLE CONTAINERS ON OR AFTER APRIL 1, 1979, AND FURTHER, PROHIBITING THE SALE OF CARBONATED SOFT DRINKS IN NON-REFILLABLE CONTAINERS THROUGH COIN-OPERATED VENDING MACHINES ON OR AFTER APRIL 1, 1981.

The "Definite Ban" Explained

If it is determined that the "definite ban" proposed in optional Recommendation 2b is in the best interests of the people of Ontario, then it would be appropriate to make the "mandatory availability regulation" (Recommendation 1) effective April 1, 1977. This timing should allow industry to modify the existing system in preparation for the larger number of empties that will have to be handled. The mandatory availability regulation is viewed primarily as a device for forcing necessary adjustments to occur over a period of time, rather than more abruptly when the ban would come into force.

The "Conditional Ban" Explained

If the "conditional ban" contained within optional Recommendation 2a becomes the chosen alternative, it can be argued that industry will have sufficient inducement to fully address environmental concerns in their proposed distribution systems improvement program. Without this concession, it would be fair to assume that any systems modifications would be oriented towards relatively narrow economic factors.

The standard container has been given lengthy and detailed consideration by the Board. It has a number of highly desirable attributes, both economic and environmental.

For the provincial government to impose, however indirectly, the standard container upon the present distribution network will not guarantee the environmental gains sought. Therefore, a compatible system must be developed to accommodate it.

The environmental benefits to be achieved depend upon how widely the standard container is marketed and the recovery rates that can be anticipated for it. Both conditions can best be sufficed within an efficient total systems framework. It is unlikely that industry on its own initiative will ever move to widespread introduction and use of a standard generic soft drink container. Without the collaboration of industry, however, it would be difficult for government to create the environment for its acceptance and development.

Some clarification of the term "FURTHER NOTICE", as used in Recommendation 2a, is required. As a result of the proposed review by the Minister's delegate of industry's progress with its systems improvement program (the review schedule has been laid out under 'Minimal Criteria' in Schedule 1), "FURTHER NOTICE" will be made to the Minister.

If market performance is unacceptable or if industry addresses environmental concerns inadequately in their systems development, advice should be rendered to the Government to FILE the ban regulation. If, on the other hand, the final review of January 1, 1979 shows industry's performance to be acceptable, there would be no further need of the regulation and the Government should be so advised.

The implementation date for the 'mandatory availability' regulation (Recommendation 1), would be tentatively set for April 1, 1977 under this option. If warranted by developments in the systems improvement program (such as the clear possibility of greater environmental benefits), postponement of the implementation date to October 1, 1977 could be considered.

Recommendations from Solid Waste Task Force

There were a number of regulations previously recommended by the Solid Waste Task Force with which the Waste Management Advisory Board concurs. Consequently, the Board recommends that the following regulations be filed:

Regulation for Display of Content Price

3. THE PRODUCER, BOTTLER, DISTRIBUTOR OR VENDOR OF CARBONATED SOFT DRINKS IN REFILLABLE CONTAINERS SHALL DISPLAY PROMINENTLY THE CONTENT PRICE OF THE BEVERAGE EXCLUDING CONTAINER DEPOSIT IN ALL ADVERTISING, MERCHANDISING OR LABELLING WHERE PRICES ARE SHOWN. THE PRICE SHOULD BE DISPLAYED IN AT LEAST IDENTICAL SIZE PRINT AS ANY PRICING SHOWN FOR CARBONATED SOFT DRINKS SOLD, ADVERTISED OR MERCHANDISED IN NON-REFILLABLE CONTAINERS.

Implementation Date: October 1, 1976.

Regulation for Mandatory Cash Deposit-Refund

4. A RETAILER SHALL BE REQUIRED TO REFUND, IN FULL AND IN CASH, THE DEPOSIT ON ANY REFILLABLE CARBONATED SOFT DRINK CONTAINER OF A BRAND, FLAVOUR AND SIZE OFFERED FOR SALE BY THE SAID RETAILER, (SUCH REFUND TO BE PAID ONLY ON A CONTAINER THAT CAN, BY WASHING AND STERLIZING, BE MADE FIT FOR THE PURPOSE FOR WHICH IT WAS ORIGINALLY INTENDED).

Implementation date: October 1, 1976.

Regulation for 'Money-Back' Designation

5. ALL REFILLABLE CARBONATED SOFT DRINK CONTAINERS PRODUCED AFTER OCTOBER 1, 1976 SHALL HAVE CLEARLY INDICATED IN A CONSPICUOUS POSITION ON THE BOTTLE OR LABEL THE WORDS 'MONEY-BACK BOTTLE'.

Implementation date: October 1, 1976.

Regulation for 'Standard Money-Back Bottle' Designation

6. ALL LABELS PRODUCED FOR STANDARD REFILLABLE CARBONATED SOFT DRINK CONTAINERS SHALL HAVE CLEARLY PRINTED THEREON IN A CONSPICUOUS POSITION THE WORDS 'STANDARD MONEY-BACK BOTTLE'.

Regulation for Posting of Notice in Retail Stores

7. EVERY RETAILER OF CARBONATED SOFT DRINKS IN ONTARIO, EXCEPTING THOSE SPECIFICALLY EXEMPTED BY THE REGULATIONS, SHALL CONSPICUOUSLY DISPLAY ON THE PREMISES A NOTICE PROVIDED BY THE MINISTER WHICH SPECIFIES THE OBLIGATIONS OF THE RETAILER AND THE PURCHASES UNDER THE REGULATIONS.

Implementation Date: October 1, 1976.

Other Regulatory Recommendations

In conjunction with 'mandatory availability' and the operative ban regulation, other regulatory measures are required.

Regulation Banning the Flip-Top Can

The Board recommends that:

8. THE SALE OF SOFT DRINKS IN NON-REFILLABLE METAL CONTAINERS WHICH HAVE DETACHABLE SELF OPENING DEVICES BE PROHIBITED ON OR AFTER JANUARY 1, 1977.

Regulation Defining Standard Containers

The standard container must be defined before any bottler can make a decision on using it. Therefore, the Board recommends that:

9. BY REGULATION THE MINISTER DEFINE A CLASS OF REFILLABLE SOFT DRINK CONTAINERS TO BE DESCRIBED AS STANDARD (THE SPECIFICATIONS TO BE DETERMINED AND ANNOUNCED BY JULY 1, 1976).

Regulation Banning Small (Less than 10-oz.) Non-Refillable Containers

A ban has been considered on non-refillable glass containers in the 'split' size (6½-oz. to 7-oz.) used primarily by bars and restaurants. The trade in this size is concentrated and, in this situation, non-refillable containers are difficult to justify. Therefore, the Board recommends that:

10. BOTTLERS, DISTRIBUTORS, AND RETAILERS BE PROHIBITED FROM SELLING OR OFFERING FOR SALE CARBONATED SOFT DRINKS IN NON-REFILLABLE CONTAINERS WHICH ARE LESS THAN 280 ML, ON OR AFTER APRIL 1, 1977.

Non-Regulatory Recommendations

Educational Program

With the preponderance of non-refillable containers in the carbonated soft drink market, many consumers are unaware of the environmental and economic advantages of using and returning refillable containers for deposit-refund. Therefore, the Board recommends that:

11. A CAMPAIGN TO EDUCATE THE CONSUMER ON THE ADVANTAGES OF REFILLABLE CONTAINERS, PARTICULARLY THE STANDARD REFILLABLE CONTAINER, BE undertaken. (THE TIMING OF SUCH A PROGRAM TO RELATE TO THE INTRODUCTION OF STANDARD REFILLABLE CONTAINERS WITH CONSIDERATION TO BE GIVEN TO A JOINT GOVERNMENT PROGRAM).

Study of Non-Carbonated Soft Drinks

The experience in other jurisdictions where action has been taken against non-refillable carbonated soft drink containers has been that non-carbonated drinks in non-refillable containers have quickly taken over an increased share of the beverage market. Therefore, the Board recommends that:

12. A STUDY BE CARRIED OUT ON NON-CARBONATED SOFT DRINKS TO ASSESS THE IMPACT OF THE REGULATIONS ALREADY RECOMMENDED ON THE MARKETING OF THESE BEVERAGES.

Study on Machine Vending of Carbonated Soft Drinks

Though some investigation of the vending industry has already been carried out, not enough is understood to identify and evaluate alternatives that might be appropriate to this sector. As well, any new container types and handling systems would have to be measured against their impact on vending. Therefore, the Board recommends that:

13. A STUDY OF THE MACHINE VENDING SECTOR BE UNDERTAKEN TO ASSESS THE NEED FOR FURTHER GOVERNMENT ACTION.

SCHEDULE I

Given that minimal performance criteria are adhered to by the private sector, it would be reasonable for the Minister of the Environment to prepare, but for the present to withhold, a ban regulation. This regulation would, however, be filed unless the following minimal criteria are observed.

Minimal Criteria

1. There must be sustained continuation of the trend towards refillable containers while the development of improved systems continues.
2. The systems improvement program would have to include:
 - a) assessment of the existing system together with the development of alternative methods of distribution, merchandising and handling for:
 - i) a completely proprietary refillable market
 - ii) a completely standard refillable market
 - iii) a mixed market characterized by both proprietary and standard containers with possibly a vestigial share of non-refillables;
 - b) evaluation of alternative systems to the satisfaction of the Minister, including:
 - (a) environmental effects
 - (b) economic effects;
 - c) implementation of those system components which best satisfy the needs of the province and of industry. Such implementation would have to be on a scheduled basis acceptable to the government.

The government would require that terms of reference for improved systems development be agreed to by July 1, 1976; that bi-monthly progress reviews be held with a delegate of the Minister thereafter for one year; and that the major system parameters be finalized by July 1, 1977. Follow-up reviews should be made January 1, 1978 and January 1, 1979.

APPENDIX A

INTERIM REPORT

CONCERNING

CARBONATED SOFT DRINK CONTAINER

MONITORING PROGRAM



Ontario.

Office of the
Chairman

Waste Management
Advisory Board

Queen's Park
Toronto M7A 1A2
416/965-3007

August 28, 1975

The Honourable William G. Newman
Minister of the Environment
135 St. Clair Ave. West
TORONTO, Ontario

Dear Mr. Newman:

Re: Status of the Carbonated Soft
Drink Container Monitoring
Program

On behalf of the Waste Management Advisory Board, I wish to submit the following report which outlines the status of the carbonated soft drink container monitoring program.

As a result of the recommendations made by the Solid Waste Task Force (and particularly by the Beverage Packaging Working Group), the Government's position on packaging was presented to all components of the industry on March 13, 1975. At that time, the Government asked for a voluntary response from industry, that within one year would essentially 'achieve the objective of reducing the use of non-refillable containers' for the sale of carbonated soft drinks in Ontario. The specific actions requested were:

1. "All brands and package sizes of carbonated soft drinks stocked and sold by a retailer in Ontario must be offered for sale in refillable containers."
2. "The price structure must reflect the desirability of refillable bottles."
3. "Convenient distribution and return systems must be reinstated to encourage consumer use of the refillable container."
4. "The availability of the refillable container must be promoted by the industry."

Continued.....

The Honourable William G. Newman
Minister of the Environment

August 28, 1975

In addition, the program called for the phasing out of the detachable flip top on metal containers for carbonated soft drinks within twelve months.

The timing requirement was indicated by the following:

- a) "demonstration of the willingness to co-operate in restoring the refillable bottle within six months"
- b) "demonstration of substantial progress within twelve months."

The Waste Management Advisory Board was designated to act as a monitor and make recommendations to the Minister of the Environment on this matter.

Based on the work done to date, the Board offers the following observations:

1. With respect to the soft drink producers and the major retail chains, there is a demonstration of willingness to co-operate in restoring the refillable container.
2. Popular brands of soft drinks in family size refillable bottles are being reintroduced by the major super-market chains. With some chains, this move is being made across the province, while others are limiting similar action to stores in designated test areas.
3. In no case, is there any indication that the retail sector is planning to reintroduce the ten-ounce refillable container.
4. Some bottlers and retailers are not reached through trade associations. Of significance in this group are a convenience store chain which sells only non-returnables in the Toronto market and a soft drink producer who bottles only in non-returnables. Direct contact with at least these two companies will be required in the near future.

The Honourable William G. Newman
Minister of the Environment

August 28, 1975

5. The vending industry has offered no concrete plan of action for meeting the objectives of the March 13th speech.
 6. Municipal ban bylaws which would come into effect before evaluation of the one-year voluntary program could be carried out would cause serious disruptions to some sectors of the industry.
 7. The creation of a stable distribution/sales and return system which will meet the stated environmental objectives over the long term is dependent upon the development of mutually acceptable return-handling mechanisms between bottlers and retailers.
 8. The question of long term stability is also dependent upon continued consumer acceptance of returnable containers.
- Given full co-operation from industry, it will only be possible to begin to measure consumer preference when the one-year program is completed. This assessment of consumer attitudes will have to be considered within the context of industry promotion of non-returnables over the past decade.
9. The problems associated with the packaging of non-carbonated soft drinks, near substitutes and fruit juices will require future consideration.

The Board has concluded that having regard to all of the problems and complexities of the issue, industry has to date made reasonable progress in meeting the objectives and schedule of the Government's program. However, the failure of the industry to consider the provision of a refillable container in the ten-ounce size has been a major weakness in the industry's response. If the lack of refillable containers in the ten-ounce size persists, the objectives of the Government program would not be met and the Board would feel obligated to recommend to the Minister that appropriate Government action be taken.

Respectfully submitted on
behalf of the Board


R. H. Woolvett
Chairman

APPENDIX B

Joint Submission
by
Retail Council of Canada
and
The Ontario Soft Drink Association

to

THE HONOURABLE GEORGE KERR, Q.C., MINISTER OF THE ENVIRONMENT

PROVINCE OF ONTARIO

February 16, 1976

INTRODUCTION

The Retail Council of Canada and the Ontario Soft Drink Association, during recent consultation with each other, agreed to make a joint submission to the Minister of the Environment, Province of Ontario.

The Retail Council of Canada represents the major food stores in Ontario, a list of which is attached and shown as Appendix "A". It is estimated by market surveys that its membership accounts for 70% of the total "take home" sales of soft drinks in Ontario.

The Ontario Soft Drink Association represents the major soft drink manufacturers in the province, as shown in Appendix "B". Production and sales of the Ontario Soft Drink manufacturers account for 75% of the total "take home" sales of soft drinks in Ontario.

It is almost a year since your predecessor in office established a direction and goal for the industry over the then ensuing twelve months. Both the manufacturing and distributing sectors of the industry have been heavily involved in the intervening period in working towards that goal and in conducting a variety of necessary research to establish the best means of making further progress. Although

you are, we know, aware of some of this activity which has taken place, you may not be aware of its full scope and it would perhaps be useful to summarise the positive steps which have been taken among the general members of both sectors.

Listed below are these activities:

Retail Activities

1. Studies* on consumer reaction to being provided an option between refillable and non-refillable packages.
2. Studies* on effects of different systems of shelf allocation of the types of package.
3. Substantial movement to equality of offering between refillable and non-refillable containers.
4. Display of unit cost per ounce on a net basis for easy comparison.
5. Display of contents only shown on shelf to allow comparison shopping between refillable and non-refillable containers.
6. Study* of sanitation problems involved in accepting refillable containers in substantial volumes.
7. Studies* re cost of handling refillables in the stores.

*Conducted by individual members of Council.

Bottler Activities

1. Seven-Up - \$1.25 millions in establishing plant and equipment to increase production in refillables.
2. Coca-Cola - Re-activating second production centre in Metro Toronto to increase production in refillables.
3. Additional production facilities in the planning stage for Hamilton/St. Catharines area by the Pepsi bottler.
4. As of February 16th, the deposit structure on refillables in Ontario was changed from five cents and ten cents to ten cents and twenty cents, in order to encourage better rates of return (and prevent the increased volume of refillables finding their way into the solid waste system).
5. Increased investment in glass float, truck fleet and conversion from wooden cases to plastic cases in line with change of increased sale of refillables.
6. All bottlers are increasing the use of handy carriers and multipaks.
7. Soft drink bottlers agreed to standardise on a limited number of sizes.
8. Throughout the year, bottlers have given increased emphasis to the advantages of refillables.

We believe that these actions, in total, very persuasively indicate that we have met the Department's requirement that positive results will be achieved from voluntary action within the time constraint established.

Experience to date indicates that the route of voluntary action is a meaningful and practicable one and also that future action requires a substantially closer degree of cooperation between the two supply sectors. We now propose to initiate this second phase. We believe we have earned the right to develop our work further on a voluntary basis in this phase.

Within this submission, we indicate that continuation of voluntary action will, within a reasonable time, achieve the optimum result without the high degree of disruption and expense which a legislated solution would imply.

The results of an independent study conducted by Peat Marwick & Partners, recently completed in Alberta, indicate that the total per annum cost of a legislated solution to the consumer amounted to \$4.9 million. Applying these costs to Ontario, a bill of approximately \$17 million would result.

We continue to endorse the government's stated position that the continuing improvement in the management of solid waste, to which all parties are committed, is resource recovery and re-cycling. We furthermore subscribe to the government's stated principles of offering the consumer a choice in the marketplace, with minimal interference in the economic stability of the province.

This program of voluntary action on the part of the Retail Council of Canada and the Ontario Soft Drink Association, the two largest segments of soft drink manufacturing and retailing, should encourage the remaining segments of the industry not represented by our two groups to undertake a similar voluntary course.

Our agreed voluntary action, to meet the government's objectives, is as follows:

STANDARDISED SIZES

In order to make comparison shopping easier for the consumer and to utilise available space on the retail shelves in the most efficient manner to promote refillables, the Ontario Soft Drink Association has agreed to standardise on four sizes, namely:

300 ml 750 ml 1l 1.5l

and furthermore, to manufacture and market no more than three of these sizes for any given brand.

The Retail Council of Canada's Ontario members have agreed to observe similar criteria in relation to house brands.

The middle range of sizes, 300 ml (10 oz.), 750 ml (26 - 30 oz.), 1L, for convenience, will be available in multi-paks, carriers and cartons which will be used for display purposes, take-home, storage and returns.

The Ontario members of the Retail Council of Canada further undertake to:

- (a) Show separately the amount of deposit from the price of the contents;
- (b) Accept empties from the consumer of brand and size carried by the respective retailer;
- (c) Refund the deposit in cash and in full, of brand and size carried by the retailer;
- (d) Undertake to make this program known to its customers.

BOTTLE DEPOSITS

We accept the principle that the deposit on refillable bottles should closely reflect the replacement cost of the container. The higher deposit, apart from acting as an increased incentive to the consumer to return the container, would lessen the cost of glass to the bottler, thus enabling him to pass on the benefit to the consumer and offering a more attractive price for soft drinks in refillable bottles.

In recognising this principle, the Ontario Soft Drink Association has recommended to its bottlers to put into effect an increased standardised deposit on refillables in the Province of Ontario of ten cents per bottle of 16 oz. and smaller and twenty cents per bottle of 26 oz. and larger, effective February 16, 1978.

PROMOTION OF REFILLABLES

Recent surveys, based on experiences in Ontario and other parts of Canada, indicate a decided swing to the larger sizes as far as the take-home trade is concerned and the industry will therefore make available soft drinks in refillable containers in the middle ranges. Since these sizes contain from two and one-half to four times the quantity of soft drinks, as compared to the single drink 10-ounce can,

10-ounce non-refillable and 10-ounce refillable bottle, we are of the firm opinion that, by concentrating on the middle range of sizes, the Minister's objectives can be met in a shorter period of time.

We therefore undertake to offer for sale a brand or flavour in a one-way container only if the same brand and flavour is available in a refillable bottle.

Where a retailer has more than one house brand, any one of these brands, in the same flavour, may be used for matching purposes. (House brand definition - Retailer has exclusive right to sell and the product bears corporate identification).

In order to achieve the desired results referred to above, we undertake to create public awareness by means of the following promotional activities:

- (a) In-store pricing - Communicate unit cost advantages of refillables;
- (b) Any promotional activities of soft drinks in one-way containers will be matched with at least equivalent promotional activities in refillable containers over a reasonable time period.

(c) The generic advertising by national brand manufacturers will represent their products in refillable containers.

INCREASED COSTS INCURRED BY REFILLABLES

A preliminary overview of the situation indicates that the use of refillables will increase the cost of distribution at both the manufacturing and retailing levels.

It is apparent that there are a variety of means which could be applied to handling refillables at the manufacturing and retail levels. All of them likely imply different ranges of costs and obligations for the supply side, possibly different obligations for the consumer and a better understanding of required contributions to meet ecological concerns by all parties.

To determine which of these means offer the best cost/benefit results and the dimensions of these costs, the two industry groups are establishing a task force, comprised of members of the two groups. The task force will have the mandate to consider the whole soft drink distribution process as a total system and review all reasonable actions that might be taken within the system to achieve the least costly

and most efficient way of handling refillables. The task force will be requested to produce a report within 12 months, with a goal of an interim report within 4 months. The task force will be empowered to retain independent, professional advisors and to draw upon the substantial research results already available within our membership, from the government's consultants and others, if it can be made available.

The task force will be asked to bear in mind that changes in current practices which involve increased costs within the total system are likely to result in costs being borne eventually by the consumer and, in making recommendations on the merits of competing systems, it should give appropriate weight to this consideration.

We would expect to review the research results with you.

MUNICIPAL LEGISLATION

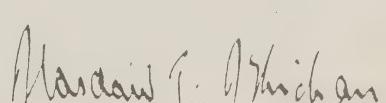
The two groups party to this joint submission firmly believe that the uniform voluntary action, as outlined above, will be effective and therefore we solicit the Ontario Government's aid in preventing the implementation of municipal by-laws, such as those passed by London, Ontario. These, we

feel, are contrary to the spirit of voluntary action as requested by the Minister and deprive the public of the right of choice emphasised by the Minister in his statement. Legislation passed in isolation by individual municipalities would hinder the orderly transition from the present to the proposed system, as outlined in our brief.

CONCLUSION

Our submission clearly indicates that we are ready to implement the measures listed in this submission as soon as we receive the Ontario Government's acceptance of the proposals in this brief. We further recommend that the Ontario Government and the parties to this brief undertake to measure the progress of public acceptance and effectiveness of this program during the next twenty-four months.

All of which is respectfully submitted.



President, Retail Council of Canada



President, Ontario Soft Drink Association

Appendix "A"

ONTARIO FOOD MEMBERS
RETAIL COUNCIL OF CANADA

Canada Safeway Limited

Dominion Stores Limited

Loblaws Ltd.

National Grocer's Co. Ltd.

The Oshawa Group Ltd.

Steinberg's Ltd. (Miracle Food Mart)

(A & P Food Stores have also endorsed this
brief)

Appendix "B"

MEMBERS
ONTARIO SOFT DRINK ASSOCIATION

Bastien Beverages, New Liskeard
Bay Beverages Ltd., Thunder Bay
Canada Dry Limited, Downsview
Canada Dry Bottling Co. (Windsor) Ltd., Windsor
Coca-Cola Ltd., Toronto
Crush Beverages Limited, Toronto
Curtis Beverages Limited, Orillia
Doran's Beverage Co. Ltd., Sault Ste. Marie
Dr. Pepper Company, Toronto
Erie & Huron Beverages Limited, Chatham
Fortier Beverages Limited, Cochrane
Garland Beverages Ltd., North Bay
Hambly's Beverages Limited, Oshawa
Kapuskasing Beverages Limited, Kapuskasing
Kitchener Beverages Limited, Kitchener
Loudon Bros. Limited, Geraldton
MacDonald & Son (North Bay) Ltd., North Bay
MacDonald & Son (Timmins) Ltd., South Porcupine
Misener Beverages Ltd., Belleville

Nu Jersey Creme Co. Limited, Toronto
Orangeville Bottling Co. Limited, Orangeville
Paquette Bros. Bottling Co.Ltd., Windsor
Parisien Beverages (Cornwall) Limited
Penetang Bottling Co.Ltd., Penetanguishene
Pepsi-Cola Canada Ltd., Toronto
Private Brands Beverages Ltd., Mississauga
Sarnia Beverages Limited, Sarnia
Seven-Up (Ontario) Limited, Toronto
Seven-Up Bottling Co. (Windsor) Ltd., Windsor
Smith Beverages Limited, Oshawa
St. Clair Beverages Ltd., Sarnia
Star Bottling Works Limited, Sudbury
Thames Valley Beverages Ltd., London
Tuckey's Beverages Ltd., Exeter
Uxbridge Beverages Limited, Uxbridge
Valley Bottling of Canada Ltd., Cornwall
Vitality Beverages, Petawawa

THE ENVIRONMENTAL ARGUMENT
FOR STANDARD GENERIC REFILLABLE CONTAINERS

The refillable container will show the greatest environmental benefits when the number of returns that it makes through the system is maximized*.

A standard refillable container should exhibit a much higher trippage than a proprietary refillable container for a number of reasons.

The prime cause of low trippage is not accidental breakage, but the reluctance of the consumer to try to return the package for deposit refund. This happens because almost all stores refuse to refund the deposit if the bottle is not in a brand and size that they sell. In turn, this means that the consumer must remember what brands and sizes are stocked by each retailer with whom he deals; he must sort out periodically his inventory of empties (ensuring that all are refundable); and he must return each to either its point of purchase or to a vendor who stocks the same brand-size. The inconvenience that is entailed results in present day trippages of three to five for most proprietary refillables. It has been calculated that in the 10-oz. size, approximately ten trips are required before the environmental benefits exceed the environmental costs.

It can be anticipated that standards would eventually be handled by most retailers and by enough of the soft drink bottlers that the consumer would be able to purchase any flavour (if not necessarily all brands) of soft drink at a number of convenient retail outlets. If he chose to buy only standard refillables he would be in the position of:

- not having to sort empties
- not having to remember who stocks what
- being able to return all empties in one trip to whatever retail establishment was most convenient to him.

* This is only true when the environmental costs of return through the system are less than the environmental costs of producing the container. This is in fact the case with refillable soft drink bottles.

This convenience of return should result in trippages in excess of 25. The brewers in Ontario experience trippages at this level with a standard bottle in a closed system, i.e., beer bottles can only be returned to a Brewers Retail outlet or empty bottle dealer. Pop Shoppes also experience far higher trippages with standard bottles in a closed system. One might do well to note that both of these organizations are also characterized by two other distinctive features:

- each sells its product in multiple lots (primarily 12 and 24 units) in a handy multi-unit container
- each has a high deposit on the multi-unit package (\$1.20 for 24 bottles of beer in a cardboard box, \$3.00 for 24-10 oz. pop bottles in a plastic shell).

Why Should The Consumer Buy Carbonated Soft Drinks in Standard Refillables?

They would be convenient to return as already discussed.

They should be cheaper than the comparable proprietary refillable package. The proprietary bottle is characterized by markings and odd shapes intended to differentiate it and create a unique image for its contents.

The standard bottle would be strictly functional and consequently much lighter. Because many producers would be using the same bottle, inventories carried by the glass container manufacturers would be smaller and production runs would be far larger. Estimates of the savings on standard bottles made by industry executives have ranged from 10% to 50%. The cost of the standard 12-oz. beer bottle is under 7¢ in Ontario. The average cost of a proprietary soft drink bottle in the 10-oz. size is over 11¢.

Why Should A Retailer Stock the Standard Refillable?

Because his worst problems in retailing soft drinks include:

- a wide range of proprietary refillable container shapes and sizes
- sorting and handling refillables
- storing returned empties.

The standards give him two package sizes instead of the seven to nine that are now promoted. If he chooses to bottle his house brands in standards, he has a package that is attractive to consumers and he can offer it more cheaply than other brands (which in many cases will be in the same package, with a different label).

If the standard bottle is accompanied by a standard shell, and sensible deposit refund systems are used, there will be very little sorting to do.

The storage of refillables is awkward now because of the many sizes, shapes and varying bottle heights that are represented.

In most backrooms, it is possible to find a number of grocery baskets being used to hold loose bottles awaiting sorting. With standard bottles and shells, cases can be stacked vertically and less space is taken up. Space savings will also result from a better and uniform design of bottle. The space efficiency of proprietary bottles can vary as much as 35 per cent depending on bottle design.

Why Should A Small Bottler Choose to Fill Standard Refillables?

His unit costs with high trippages are lower. If he is a multi-franchise bottler, like the retailer, he has sorting problems with proprietary bottles. With standard refillables, he uses the same bottle for all of his brand lines.

If he runs short of empties, borrowing from other bottlers is facilitated, and he will be using a container which has a lower initial cost.

Why Should Major Bottlers Use the Standard Refillable?

Two or three of them, at least initially, probably will not. The others have expressed support for the standard partly because they have not attempted in the past to sell their product on the basis of the market image that surrounds the container.

It is interesting to note that those companies which want to protect any market advantage that they feel is vested in a unique proprietary container, have other flavours which are not identified with any particular container image.

Most consumers are not aware, for example, that Tab and Sprite are produced by the Coca-Cola Company. Economics may eventually dictate that such low container image beverages should be bottled in standards.

All bottlers face possible delisting of those carbonated soft drinks which are not in refillables in a limited number of package sizes.

Other things being equal, a good businessman will offer his product in those containers for which there is the greatest demand. If the consumer exercises the anticipated preference for standards, that demand will work its way back through the system, exerting a consequent pressure on each supplier level.

What are the Net Environmental Benefits of a High Trippage Bottle?

Less material is used in the manufacture of the standard containers and fewer of them are needed. Both factors result in significant energy and material savings. Standard bottles can also be of compact design, thereby requiring less transportation and retail display space.

High trippage means that the standard will seldom find its way into the provincial garbage pail and will lead to a reduction in the volume and weight of solid waste generated. A conservative estimate on weight saving alone has been placed at 28 per cent for a standard over the average proprietary bottle. If standard trippages reach 25, as compared to ten for proprietaries, the savings in solid waste generated would be 71 per cent. Energy savings would be substantially less than this but still significant. If standard shells are introduced, the waste generation attributable to secondary packaging for soft drinks will also be significantly reduced.

A bottle that can be conveniently returned should result in less litter due to an increased propensity to return on the part of the consumer, and a higher level of activity on the part of scavengers.

If standards are successfully introduced for carbonated soft drinks, their eventual spread to the packaging of other free flowing beverages would have to be considered well within the realm of possibility.

FLOAT EQUITY SYSTEMS FOR STANDARD REFILLABLE SOFT DRINK CONTAINERS

In a standard bottle system where containers have no distinguishing markings, a system is necessary to maintain bottle returns in direct proportion to individual bottler sales. The purpose of this study was to develop and evaluate alternative mechanisms that will ensure an equitable return of containers (float) to the bottlers.

SOFT DRINKS INDUSTRY CHARACTERISTICS

There are about 110 bottlers in the province serving 36,000 retail outlets. The five major national brand companies operate about 20 plants, while the remaining plants are owned by independent multi-franchise bottlers. With the different brands, bottle shapes, sizes, and colours, it is estimated that soft drinks are sold in over 200 different product packages.

At present, float-equity is not a problem since bottlers collect only their own proprietary or distinctive bottles. Some non-distinctive refillable bottles are presently sorted and collected by the paper label. Purchase of the product by consumers is dictated by both impulse and planned buying. Because of the present volume of impulse buying, and bottlers' marketing practices, only a small percentage of soft drink bottles is sold in multi-packages.

IMPACT OF STANDARD BOTTLES

As is presently proposed, there will be a mixture of standard and proprietary bottles in the market. This mixture may create additional handling and sorting at least during the implementation period. For the bottlers who continue to offer the present containers, standard bottles may mean four additional bottles (two sizes, two colours) and more handling. However, as the number of standard bottles increases and proprietary decreases, the additional handling will be eliminated and the advantages of standard bottles realized.

Because of the opposition to standard bottles by some bottlers, a standard bottle system must be feasible without the full participation of all bottlers. Although a proprietary shell or standard shell system could function when one or two bottlers opt out, some of the advantages to the retailer and consumer are lost. A central warehouse system could be underutilized and hence costly if a significant portion of bottlers avoided the use of standard bottles.

Standard bottles will also require new investments for the bottlers. New glass bottle inventory would amount to about \$22 million, while new washing and labelling equipment could result in over \$6 million expenditure.

Float Volumes

The amount of drinks sold in standard bottles will depend on both consumer and industry acceptance. An estimate of standard bottles was made based on minimal acceptance (25% market penetration) and overall acceptance (80% penetration). Based on the assumption of 80% market penetration, there would be approximately 900 million standard bottles of soft drinks sold a year. This would result in a doubling of the total number of refillable container sales. The float-equity system must be able to handle this increased volume. For the retailer, this volume increase may mean additional container storage space.

SYSTEM ALTERNATIVES

The following five alternative float-equity systems were considered.

Central Warehousing

With the central warehousing system, all products would be delivered from central warehouses to retailers by one company representing all bottlers. On delivery, the warehouse driver would pick up all empties and return them to the warehouse for sorting and counting. Standard empties would be returned to bottlers based on sales of new product as recorded by a central accounting function.

Depots

In the depot system, all empty refillable containers would be returned to a depot by the consumer. The depot operators would sort, count, and allocate standard bottles in proportion to product sales as determined by a central accounting function. Bottlers would pick up all their proprietary bottles, and their share of standards.

Proprietary Shell - No Monitoring

The proprietary shell - no monitoring system assumes that bottlers would deliver standard and proprietary bottles in their proprietary shell. As empties return to the store, the retailer would place the proprietary bottles in the appropriate shell, and the standard bottles in any shell. On delivery, the driver would pick up his company's shells which could contain a mixture of both the company's proprietary bottles and standard bottles.

P r o p ri e t a r y S h e l l-C o u n t i n g

This system is similar to the above system but entails a bottle-counting function to control the float. Bottle counting is done either by the bottler at the plant when bottles return, or by the driver when the empties are collected at the retail point. In each case, data on returns and sales is sent to a central accounting function for equity maintenance.

S t a n d a r d S h e l l

The standard shell system is based on the use of a standard or common industry shell for the delivery and pickup by the bottler of all standard bottles. Proprietary bottles would remain in proprietary shells. The retailer would sort proprietary bottles into the proprietary shell, and place the standard bottles in standard shells, sorted by colour. The bottlers would collect their proprietary shells and up to as many standard shells as were delivered. After peak selling periods, empty returns will be greater than sales. During these periods, special arrangements would be made between the bottler and the retailer.

A S S E C T M E N T C R I T E R I A R I A

In evaluating the above float-equity systems, a number of criteria were considered reflecting the concerns of the bottlers, retailers, consumers, and government. In addition to the degree of float equity achieved by a system, the main criteria are summarized below:

- additional costs required by the system (both initial and operating)
- the amount of handling required by the retailer and bottler
- the need for supporting or administrative systems
- impact on the consumer
- the adaptability of the system across the province
- ease of implementation
- ability of the system to function when one or more bottlers opt out of the system.

It is important that a system does not provide any significant resistance to the introduction of standard bottles. The system which has the best chance of success will be one that is least disruptive to the present soft drink industry.

DEPOSIT LEVELS

Float-equity can only be guaranteed when bottles are counted at some intermediate control point such as provided by a depot or central warehouse. With other systems, reasonable float-equity can be achieved only when deposits on bottles are maintained at a level near new bottle replacement costs. With deposits about equivalent to replacement costs (bottle cost plus transportation), there is no incentive for bottlers to take a disproportionate share of empties.

The proprietary and standard shell systems assume such a deposit structure.

EVALUATION

The only advantage of the depot system is its ability to guarantee float-equity and the elimination of all retailer handling of empties. Its major disadvantage, however, is its high operating costs and inconvenience to consumers.

As long as deposits are nearly equivalent to replacement costs, the proprietary shell system with counting offers no significant advantages over the system without counting. In fact, such a system would require additional operating costs for a central accounting function.

The three remaining systems, standard shells, central warehousing, and proprietary shells with no monitoring, each proved to have some significant advantages.

Standard Shell

The major advantage of this system is a reduction of the handling costs and storage space for the retailer. With the retailer separating by colour, there is also potential savings for the bottler in sorting. However, this system will necessitate the purchase of the new standard shells costing in the order of \$26 million. Since the average shell life is about ten years, there is a problem in the disposition of existing shells and hence implementation.

Central Warehousing

This system will cause the greatest disruption to the industry during the implementation period. Furthermore, it has a high risk of failure during the initial introduction since it requires participation

of nearly all the major bottlers to share in its costs. However, the central warehousing system offers several long-term advantages, such as full guarantee of float-equity and its potential for improving the efficiency of the overall soft drinks industry distribution system.

Proprietary
Shell - No Monitoring

Although this system cannot guarantee absolute float-equity, a reasonable balance in long-term float-equity can be achieved by keeping deposits at a level near bottle replacement costs. The system's advantages include:

- little disruption to the bottlers
- can function without the participation of all bottlers
- can be easily implemented across the province
- no required supporting systems
- low initial costs and no added operating costs
- system is the most acceptable one to bottlers.

RECOMMENDATION

For the introduction of standard bottles, we would recommend the proprietary shell system with no monitoring. This system meets all the important criteria and has the best opportunity of success during the implementation of standard bottles. However, its ultimate success rests with the soft drink industry, and its desire to make the system work.

The central warehousing system offers some long-term advantages, and should be given consideration once standard bottles have gained wide acceptance in the industry.



